REMARKS

This is a full and timely response to the Office Action dated November 8, 2005. Claims 25-34 have been withdrawn from consideration and claims 1-6, 8, 13-17, 19-21, 35-38 and 46 have been amended, such that claims 1-24 and 35-46 are under consideration. Reexamination and reconsideration are respectfully requested.

Claims 5, 17 and 38 have been objected to under 37 CFR § 1.75(c) as being of improper form for failing to further limit the subject matter of a previous claims. Each of these claims has been amended to remove the phrase "wired or" to obviate the basis for this objection.

Claims 1-24 and 46 have been rejected under 35 U.S.C. § 112, ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant appreciates the Examiner's attention to the noted claims and has amended the claims accordingly. Specifically, claim 1 has been amended to remove the term "and" as suggested; claims 4 and 16 have been amended to state "usage by said service user"; claim 35 has been amended to indicate that the first identification information storage means stores the first identification information; claims 1, 13 and 46 have been amended to recite "encryption key information"; claims 1, 13, 35 and 46 have been amended to recite "a first identification information" and "a second identification information" in each first instance so as to provide appropriate antecedent bases; the recitation of "preset" has been removed from claims 1-24 and 46 and antecedent basis of the encryption key information has been clarified; claims 9 and 21 have been amended to provide new dependency, and proper antecedent basis for the transient storage means; and claims 3 and 15 have been amended to clarify the features of the random number.

Applicant submits that amended claims 1-24 and 35-46 are all recited with the requisite particularity and distinctness and requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, ¶2.

Claims 1-5 and 13-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,584,444 to Tello ("Tello") in view of Schneier, Bruce, "Applied Cryptography," John Wiley & Sons, pp. 170-178, 1996 ("Schneier").

With reference to independent claim 1, Applicant's claimed invention recites an authentication system comprising a portable terminal and an authentication device. The portable terminal stores first identification information that discriminates the portable terminal, and also receives input of associated second identification information. The portable terminal encrypts the second identification information with encryption key information and transmits the encrypted second identification information to the authentication device. The authentication device stores the first and associated second identification information, and generates the encryption key information, wherein the encryption key information is a random number made up by a preset number. The authentication device performs authentication by using the encryption key information to compare the encrypted second identification information and the second identification information stored therein.

Various features of Applicant's claimed invention are not disclosed or suggested by the relied upon references, taken alone or in combination. Tello discloses a Virtual Private Network (VPN) service provider system and related technology. The VPN system accommodates the transfer of data over a data network, with third party billing. (Tello, Abstract). The user may be prompted to provide a number to call, a VPN user ID, and a password (e.g., through the user interface of FIG. 3). The password is encrypted and provided to the VPN provider, which verifies the password and provides an authorization code that allows data to be transferred through the network. Tello thus allows a user to enter a VPN user ID and password to use the network.

While the Tello system may be convenient to the user for certain activities, it clearly does not disclose or suggest Applicant's claimed features such as a first identification information that discriminates the portable terminal, which provides enhanced security. In fact, Tello teaches away from Applicant's claimed invention in that regard. With the invention recited in Applicant's claim 1, the first identification information discriminates the portable device. This means that the user must have the actual portable device, as well as the associated second identification information, to accommodate authentication. With the Tello system a person who has the VPN credentials (VPN user ID and password) may apparently go to any appropriately configured terminal and use the VPN, simply by entering the information. With this arrangement, there is no discrimination of the actual device that is used pursuant to

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authentication.

Schneier does not remedy the deficiencies of Tello. Schneier is relied upon for its apparent disclosure of the generation of keys such as based upon a random number generator. As with Tello, there is no apparent disclosure or suggestion of having the first identification information stored in the portable terminal and being used to discriminate the portable terminal.

Independent claim 13 is also neither disclosed nor suggested by Tello or Schneier, for reasons similar to those provided regarding claim 1 above.

Since Tello and Schneier fail to disclose features that are recited in Applicant's independent claims 1 and 13, whether considered alone or in combination, Applicant submits that the Examiner has failed to produce a prima facie case of obviousness.

Also, even if the proposed combination would produce the claimed features, which is not the case, such a combination would be improper as there is no evident motivation to combine the references in the fashion offered by the Examiner. Applicant submits that the Examiner has engaged in an attempt to reconstruct the claimed invention in hindsight, and has failed to set forth a proper basis for an obviousness rejection.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of independent claims 1 and 13 as being unpatentable over Tello in view of Schneier, as well as the corresponding dependent claims that incorporate the described features and that respectively add their own distinct features.

Claims 6-7, 9, 18-19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tello in view of Schneier, and further in view of Glazner, Lon, "Storing Data with the RAMPACK B," February, 1999 ("Glazner").

These claims variously depend from claims 1 and 13, which are neither disclosed nor suggested by Tello and Schneier for the reasons provided above. Glazner is relied upon for its disclosure of RAM type memory, and offers no apparent disclosure or suggestion of the authentication-related features described above. Accordingly, the proposed combination of Tello, Schneier and Glazner also fails to put forth a prima facie case of obviousness.

Moreover, Applicant again notes that the proposed combination would be improper as there is no evident motivation to combine the references in the fashion offered by the Examiner. There is nothing in Tello and Schneier suggesting the usage of transient storage, and nothing in

Glazner suggesting that the disclosed RAM could or should be implemented in authentication systems such as those claimed by Applicant.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 6-7, 9, 18-19 and 21 as being unpatentable over Tello in view of Schneier, as well as the corresponding dependent claims that incorporate the described features and that respectively add their own distinct features.

Claims 10-12, 22-24 and 46 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tello in view of Schneier, and further in view of U.S. Pat. No. 6,195,698 to Lillibridge ("Lillibridge").

Claims 10-12 and 22-24 variously depend from claims 1 and 13, and claim 46 includes features similar to those found in claims 1 and 13. As described in detail above, Tello and Schneier fail to disclose or suggest the features recited in those claims. Lillibridge also fails to disclose or suggest, *inter alia*, having a portable terminal store a first identification information that discriminates the portable device. Nor does Lillibridge offer any hint or suggestion of plural input units having arraying positions that are variable, as offered by the Examiner. Rather, Lillibridge discloses a string that is randomly modified to form a riddle. (See, *e.g.*, Lillibridge FIG. 4). The random modification of a string in no way discloses the described features or Applicant's claimed invention.

Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claims 10-12, 22-24 and 46 under these grounds.

Claims 1-9, 13-21, and 35-42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,880,769 to Nemirofsky ("Nemirofsky") in view of Schneier.

As described above, Schneier fails to disclose or suggest various features of Applicant's claimed invention. Nemirofsky is also devoid of any description of such features.

Nemirofsky discloses an interactive smart card system for integrating remote and local services. (Nemirofsky, Title). The Examiner cites a portion of the reference referring to a financial services application. (Nemirofsky, 4:50-5:15). As understood by Applicant, in this system a smart card stores account information for remote financial services. The user initiates a financial transaction by providing input to the smart card using buttons and selecting specific financial transactions displayed on an LCD. After receiving the request from the user, a

connection with the financial institution is initiated and data is exchanged to carry out a fully automated transaction. Pursuant to this transaction, "[f]or enhanced security, a transaction process may require the smart card 10 user to enter a PIN code, using the buttons 30 or 32 on the smart card 10, which will be authorized by the financial institution prior to carrying out the transaction." (*Id.*, at 5:11-15). All that this section appears to disclose is provision of a PIN code to the financial institution for enhanced security. There is no apparent disclosure or suggestion of various features of Applicant's claimed invention, such as storage of the first identification information that discriminates a portable terminal, receiving input of the associated second identification information and then encrypting the second identification information using encryption key information provided for the portable terminal. Further, there is no disclosure or suggestion of various authentication device features, including having the first and second information, encryption key generating, and comparison authentication features claimed by Applicant.

Since Nemirofsky and Schneier fail to disclose these various features that are recited in independent claims 1 and 13, whether considered alone or in combination, Applicant submits that the Examiner has again failed to produce a prima facie case of obviousness.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of the cited claims as being unpatentable over Nemirofsky in view of Schneier.

Claims 10-12, 22-24 and 43-46 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Nemirofsky in view of Schneier, and further in view of Lillibridge.

As described above, Lillibridge does not remedy the deficiencies of Nemirofsky and Schneier in that it also fails to disclose or suggest, *inter alia*, having a portable terminal store a first identification information that discriminates the portable device. Moreover, Lillibridge is devoid of any disclosure of plural input units having arraying positions that are variable, as contended by the Examiner. Lillibridge instead discloses a string that is randomly modified to form a riddle. (See, e.g., Lillibridge FIG. 4), which in no way discloses the described features or Applicant's claimed invention. Still further, the Examiner again appears to be attempting to reconstruct Applicant's claimed invention in hindsight. There is no proper motivation the various references in the fashion offered by the Examiner.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the

rejection of the cited claims as being unpatentable over Nemirofsky in view of Schneier, and further in view of Lillibridge.

Claims 35 and 36 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,584,444 to Tello.

As described regarding the claims above, Tello fails to disclose or suggest, *inter alia*, having a portable terminal the comprises a first identification information storage means having a first identification information for discriminating the portable terminal stored therein, and actually teaches away from such a feature. Accordingly, Tello clearly does not disclose each and every feature recited in Applicant's claims 35 and 26, and Applicant respectfully requests reconsideration and withdrawal of the rejection of those claims as being anticipated under 35 USC § 102(e).

For the foregoing reasons, reconsideration and allowance of the claims which remain in this application are solicited. If any further issues remain, the Examiner is invited to telephone the undersigned to resolve them.

Respectfully submitted,

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By_____
Ronald P. Kananen
Registration No.: 24,104
Christopher M. Tobin
Registration No.: 40,290
Attorneys for Applicant

RADER, FISHMAN & GRAUER, PLLC
Lion Building, 1233 20th Street, N.W., Suite 501
Washington, D.C. 20036
Tel: (202) 955-3750; Fax: (202) 955-3751
Customer No. 23353